

REMARKS

Applicant, his principal representatives in Germany, and the undersigned have carefully reviewed the First Office Action on the merits of October 8, 2008 in the subject U.S. patent application, together with the prior art cited and relied on in the rejections of the claims. In response, the applicant, through the undersigned, respectfully asserts that the claims now pending in the application are patentable over the prior art cited and relied on in the rejections of the claims. Reexamination and reconsideration of the application and allowances of the claims is respectfully requested.

As set forth in the Substitute Specification, as depicted in the drawings, and as recited in the claims, the subject invention is directed to a printing press. A forme cylinder 02 is usable to print a web of material 19, as may be seen in Figs. 2-4. In prior devices, such as are depicted in Fig. 1, it is often the case that the page orientation or page number of the print job required a web whose web width was substantially less than the width of the forme cylinder 02. This is discussed at paragraph 005 of the Substitute Specification where either a four-page wide format of the material to be printed was wider than the width of the forme cylinder, or was sufficiently less than the width of the forme cylinder to result in an under-utilization of the forme cylinder. If a web with twice the number of pages was proposed to be printed, that web width would be greater than the width of the forme cylinder.

The present invention, as is depicted, for example in Fig. 2, overcomes that problem. As seen in Fig. 2, the forme cylinder has a defined number of printing pages. As summarized at paragraph 034 of the Substitute Specification, the number of printed pages in the width of the forme cylinder is N, wherein N is a natural number that is

evenly divisible by three. N pages have a width less than the width of the forme cylinder but N+1 pages have a width greater than the width of the forme cylinder. At least one longitudinal cutting device, such as is depicted at 17 in Fig. 2, is placed adjacent the forme cylinder. The longitudinal cutting device 17 is located so that it will longitudinally sever the web between a Kth page and a K+1th page, wherein K is either one third or two thirds of N.

As depicted in Fig. 2, the forme cylinder may have a six page width and a two page long circumference. The result is the printing of 12 pages on the web of material for each revolution of the forme cylinder 02. The longitudinal cutting device 17 is located so that it will sever the web 19 into a wide partial web 14, i.e. a partial web with 4 pages across, and a narrow partial web 16, i.e. a partial web with two pages across.

A longitudinal fold former is placed after the forme cylinder and the at least one longitudinal web cutting device. Such a longitudinal fold former is depicted at 06 in Fig. 2. The longitudinal fold former 06 can be used to impart a longitudinal fold to at least one of the partial webs that have been formed by the longitudinal web cutting device. The former has a former entry direction, in the area of the at least one longitudinal web cutting device, which is transverse to the web running direction. As may be seen quite clearly in Fig. 2, the former entry direction is generally 90° to, or transverse to, the press alignment direction M, as depicted in Fig. 2.

As discussed at paragraph 011 of the Substitute Specification, in the printing press in accordance with the present invention, the entire width of the forme cylinder is used to print a number of side-by-side pages, with that number of pages being divisible by three. At least one of the partial webs, which results from the use of the longitudinal

cutting device, can be conducted through the former. In the course of that web's passage through the former, it can be longitudinally folded at its center. The other printed web can also pass through the former but may not be longitudinally folded. It may also be conveyed outside of the longitudinal former. It may be associated with the longitudinally folded web. It may also be kept separate from that longitudinal web.

In the Office Action of October 8, 2008, the earlier Restriction Requirement of August 11, 2008 was made final. In response, claims 24-45 have been withdrawn from consideration. As indicated in the Restriction Requirement, claim 22 is believed to be a claim that links all of the groups of inventions set forth in the Restriction Requirement. Upon the indication of the allowability of independent claim 22, it is noted that the Restriction Requirement for all of the linked inventions will be withdrawn and that all of the claims depending from the then allowable independent claim will be fully examined for patentability.

In the first Office Action on the merits of October 8, 2008, claim 22 was rejected under 35 USC 103(a) as being unpatentable over U.S. patent No. 2,463,709 to Higgins in view of U.S. patent No. 6,827,012 to Palmatier. Claim 23 was rejected under 35 USC 103(a) as being unpatentable over Higgins in view of Palmatier and further in view of U.S. published patent application No. 2004/0244615 to Herbert. It was asserted in the Office Action that Higgins describes a printing press without a former and that Palmatier describes such a former. It was further asserted that it would be obvious to combine the two, to result in the subject invention, as recited in currently pending claim 22. For the reasons to be set forth below, the undersigned respectfully disagrees. The Higgins and Palmatier references are from very different areas. It would not be obvious to combine

them. Even if they were to be combined, the result would not render obvious the subject invention, as set forth in currently pending claim 22.

In the patent to Higgins, there is shown a book printing and binding device. A printing cylinder 10, as depicted in Fig. 2 carries an arrangement of six printing plates across its width and four plates about its circumference. Each one of the plates carries four page images. As may be seen in Fig. 1, a web, which has been printed by the printing cylinder 10, is slit longitudinally into six partial webs. Each one of these partial webs, assuming that they are of equal widths, has a width of one-sixth of the width of the original web. Each one of the partial webs is turned by a respective turning bar 12, of which there are six depicted in Fig. 1. Each such partial web or ribbon R1 to R6 is directed about guide rollers 13, 14 and 16 and is received between feeding rollers 17 and 18. The plural ribbons R1 to R6 are assembled on top of each other at the feeding rollers 17 and 18 and are then cut transversely by a pair of cutting rollers 21 and 22. The now transversely cut signatures are collected and are cross-folded by a collection cylinder 23 and a cooperating folding jaw cylinder 24. The transversely folded signatures 26 are received by a delivery cylinder 27 and are deposited on a delivery conveyer 28.

Claim 22, as currently pending, recites the provision of a forme cylinder with printing plates of N pages. Claim 22 further recites that N is a natural number divisible by three. Claim 22 further recites that the number of pages N has a width less than the width of the forme cylinder but that the width of N+1 pages would be greater than the width of the forme cylinder. The patent to Higgins does not specifically discuss such a structure. It shows six plates across the forme cylinder. However, there is no discussion

that the number of plates, or the number of pages that these plates print must be a number N that is a natural number divisible by three. Higgins could just as easily have shown five plates across, again with each plate being a two page width. That configuration would not have met the limitations of claim 22. There is also no teaching or suggestion in Higgins of the width of the number of pages being such that the number of pages N, plus one page, would be greater than the width of the printing cylinder 10. The Examiner is making assumptions regarding the disclosure of the Higgins reference that are not supported by any teaching of the reference.

Claim 22 requires that the at least one longitudinal web cutting device be usable to cut the web into partial web widths with each of the partial web widths being formed by placing the at least one longitudinal web cutter on a boundary that divides the web into either a one-third web width and a two-thirds web width or into three one-third web widths. In the Higgins device, the web is divided into six partial webs or ribbons. It appears that each such ribbon R1 to R6 is one-sixth of the original width of the web. There is no teaching or suggestion in the Higgins reference of the function attributed to it by the Examiner, either with respect to the number of pages N or to the location of the at least one longitudinal web cutter at a one-third or a two-third web width.

The Examiner is correct in his statement that Higgins does not show the provision of a longitudinal fold former. Since the Higgins device divides the web into a plurality of ribbons, each of two pages in width, there would be no reason to provide a longitudinal fold former. Each of the ribbons in Higgins is only two pages wide to start with. Once each ribbon has been cross-folded, the resultant signatures 26 are only one

page on each side of the transverse fold line. There would be no reason to provide a longitudinal fold forme in the Higgins device.

The secondary reference to Palmatier is directed to a roll-to-roll printing device. As may be seen in Fig. 1, a printing device, generally at 1, is usable to print a web of material in a plurality of printing units of a printing press 14. Once the web of material has been printed by the printing press 14, it is slit, by a slitter 214, into a plurality of partial webs. Each one of these partial webs is wound onto a new roll, such as the rolls 18 and 19, as depicted in Fig. 2. This is one separate, independent part of the device depicted in Fig. 1 of Palmatier.

The second, independent part of the Palmatier reference is the assembly device, which is depicted generally at 20 in Fig. 1. Assembly device 20 is used to unroll the previously printed web rolls 18 and 19, and to then assemble them into usable products, such as inserts for newspapers and the like. A typical use for the Palmatier device would be to print inserts for a Sunday edition of a large newspaper, such as *The Washington Post*. The inserts would be printed at times when the press assembly 14 was not being used to print the daily edition of the paper. The inserts could be rolled into rolls 18 and 19, could be set aside until they were needed, and could then be assembled for insertion into the Sunday paper.

In the assembly device 20, the rolled, printed partial webs, which had previously been provided by the printing press 14, are again unrolled. As seen in Fig. 3, the previously printed partial width webs or ribbons 212, 213, 214 and 215 are all combined and are directed to a former board 302. The webs are somehow formed by the former

board 302 and are folded by the nip 304. A ribbon cutting device 308 is then used to sever the folded ribbons into signatures, such as the one depicted at 310 in Fig. 3.

It is asserted in the Office Action that the former 302 has a former entry direction in "... an area of said at least one longitudinal web cutting device (214 in Fig. 1 or 516 and 515 in Fig. 5..." It is respectfully submitted that element 214 in Fig. 1 is one of the ribbons that is being unrolled in the assembly device 20. It is also respectfully submitted that the cutting device 515 and 516 are part of the printing device, generally at 14, not at 214, as incorrectly indicated in Fig. 5. These cutting devices are used to longitudinally sever the web before the various resultant ribbons are re-rolled onto the rolls 18 and 19 of already printed partial webs.

There is no teaching, or suggestion in the Palmatier device with respect to the location of the at least two slitting knives 515 and 516 at a specific location with respect to the width of the web, as is recited in claim 22. The line of each cut is in line in the direction of travel of the web 16. Each line of cut corresponds to a border 502 of a plurality of page images 504, all as discussed at Column 7, starting at line 15 of Palmatier. There is no discussion of a number of pages N, of the relation of the number of pages N to the width of the forme cylinder or of the location of the at least one longitudinal cutter.

There is no teaching or discussion of the presence of any cutter in the portion of the Palmatier reference which includes the formers board 302 and the nip 304. The plurality of ribbons 212, 213, 214 and 215 are each unrolled from a previously printed roll, such as the rolls depicted at 18 and 19. These previously printed rolls 18 and 19 were formed in a completely separate part of the Palmatier device, the printing device 1.

As is discussed at Column 2, starting at line 6, the printing device 1 and the assembly device 20 are separate devices. The web is slit in the printing device. The resultant printed ribbons are stored and are then used in the independent assembly device, which may include a folder.

Palmatier further asserts that "...the problems associated with folders can be decoupled from the printing process." Note the discussion at Column 2, lines 14-17. Also note the discussion at Column 2, lines 37-40 which sets forth that "...a folder located in the assembly device need not be directly at the printing press." It is quite clear that the Palmatier reference directly teaches away from the combination of a folder of any type in the printing assembly. In Palmatier, the folder is kept physically separate from the assembly process.

It would not be obvious to one of skill in the art to combine the Higgins and Palmatier references. As discussed previously, Higgins is a book printing device that does not include the provision of a folder. Palmatier teaches that the folder should be kept separate from the printing device. It would not be at all apparent to one of skill in the art to add a folder to Higgins, where there is no motivation, other than the teachings of the subject invention, to do so. It is also very clear that Palmatier teaches directly away from the inclusion of a folding device in a printing assembly. How could the two be combined, in the convoluted manner suggested by the Examiner, absent the teachings of the subject invention?

As has been discussed above, neither Higgins nor Palmatier teach or suggest the relationship of the number of printed pages on the forme cylinder and their width, as a function of the width of the forme cylinder, as recited in claim 22. Neither Higgins nor

Palmatier teach or suggest the location of the longitudinal cutting device or the positioning of its at least one cutter. For these reasons, claim 22 as presented in the Preliminary Amendment, is believed to be patentable over the prior art cited and relied on.

The Herbert reference does not provide the teachings of the subject invention, as recited in claim 22 and 23 that are missing from the Higgins and Palmatier references. Herbert is directed to a rotary printing press and includes a superstructure with turning bars, and an arrangement of longitudinal fold formers. The discussion at paragraph 059 of the usable length of the barrel as being understood as the portion of the barrel which is suited for receiving dressings is of no relevance to the subject invention. This barrel width clearly corresponds to the maximum possible width of a web that can be printed. As discussed at paragraph 059, the usable width of the barrel excludes bearing rings and support journals. There is no discussion in Herbert about any relationship of number of pages N being divisible by three and that each of the pages has a width such that the number of pages N, plus one page would exceed the width of the forme cylinder. The depiction in Fig. 15 of Herbert is of three fold formers 101, 102 and 103 placed side-by-side. Each of the printed webs is offset by an odd number multiple of half a former width. Again, this is not relevant to the subject invention, as recited in claims 22 and 23. The Herbert reference does not overcome the teachings of the Higgins and Palmatier references.

Newly provided independent claim 46 is being submitted at this time to provide the applicant with additional protection. Claim 46 is similar to claim 22 and recites a press alignment direction of travel of the web of material and the location of the former

as having a former entry direction which is transverse to the press alignment direction and parallel to the forme cylinder axis of rotation. Claim 46 is believed to also be patentable.

The Substitute Specification is being amended to correct a missing word and to correct a typographical error. These two changes do not contribute any new matter.

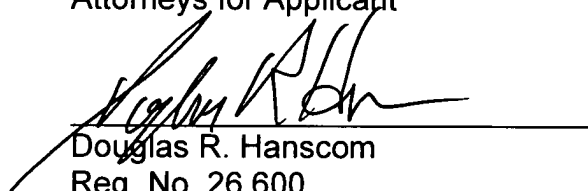
SUMMARY

Claims 22 and 23 are carried forward unamended. Claims 24-45 have been withdrawn. New claim 46 is being added. The Substitute Specification has been amended in a manner which does not present any new matter. It is believed that the claims now pending in the application are patentable over the prior art cited and relied on. Allowance of the claims and passage of the application to issue is respectfully requested.

Respectfully submitted,

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